

# **The Economic Benefits of the Use of Air Quality Information and Forecasts: *Explorations in Productivity & Health Care in New England***

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## **Summary: An Exploration of the Economic Benefits of the Use of Air Quality Information and Forecasts (AQIF)**

- For the most sophisticated current users, AQIF leads to changes in behavior & organization practices that provide economic benefits to users and have broad social benefit
- However, the majority of the population never accesses AQIF. This is indicative of the unused and “untapped” potential of air quality information and forecasts.
- The untapped potential of the use of AQIF in New England and beyond is suggested by...
  - the significant negative correlation between ozone levels & indoor worker productivity
  - the correlation of asthma services at hospitals to pollen, specifically ragweed and sage.
  - quantitative assessment of the latter revealed that if a modest 1/4th of the increased asthma treatments due to pollen could be avoided with pollen information and forecasts the savings in hospital costs in the Seacoast of New Hampshire would be about \$75,000. Extrapolating this to the nation as a whole this could potentially result in over \$140 million in avoided health care costs nationally.
  - on the former, if 20% of the worker product loss could be avoided by the adoption of mitigation strategies based on air quality forecasts, the economic value (of the forecasts) would have been more than \$23 million in one summer in New England
- Forecasts need to be sufficiently credible that firms will use them as a basis for changing their operations. Firms whose corporate objectives emphasize reliable service and employee well being will be most willing to pay for air quality forecasts. The actual optimal forecast accuracy and expenditure level can be determined with experience, as private firms and forecasters provide air quality forecasts and real data can be used.
- There appears to be market potential for low cost ozone sensor. A significant portion of the market potential is in its use for compliance in US and internationally.

